

Patent Claims

1. Method for the transmission of information in various carrier frequencies with a frequency hopping method, comprising the following steps:
 offering a table (25) with a plurality of n possible carrier frequency value f_x in
 5 addresses 1 through N of the table (25);
 generating (22) a sequence of random values;
 reading out at least a part M of the N carrier frequency values f_x from the
 corresponding addresses of the table (25) on the basis of the generated sequence of
 random values, whereby $M \leq N$; and
 10 transmitting (4, 6) information in the corresponding carrier frequencies, whereby the
 following steps are implemented for the setup of a connection:
 sampling (26) a carrier frequency;
 deciding (27) whether a message containing at least an initialization information was
 received on this carrier frequency during a specific time span;
 15 when the decision is negative, selecting a new carrier frequency and sampling this
 new carrier frequency;
 when the decision is positive, generating (30) the sequence of random values upon
 employment of the initialization information.

2. Method according to claim 1, characterized in that the generated
 20 sequence of random values is converted into address values between 1 and N with
 which the carrier frequency values are read from the table (25).

3. Method according to claim 1 or 2, characterized in that the following
 steps are implemented for the synchronization:
 sampling (26) a carrier frequency;
 25 deciding (27) whether a message was received on this carrier frequency during a
 specific time span;
 when the decision is negative, selecting a new carrier frequency and sampling this
 new carrier frequency;
 when the decision is positive, generating (30) the sequence of random values upon
 30 employment of the message.

4. Method according to one of the preceding claims, characterized in that a part M of the N possible carrier frequency values is read out from the table (25), whereby the remaining N-M carrier frequency values are employed for replacing disturbed carrier frequency values of the M carrier frequency values.

5 5. Method according to claim 4, characterized in that the table (25) is updated (31) from the N-M carrier frequency values before the read-out upon replacement of the carrier frequency values that correspond to disturbed carrier frequencies.

6. Apparatus for the transmission of information in various carrier
10 frequencies with a frequency hopping method, comprising
a means (23) for offering a table (25) with a plurality of n possible carrier frequency value f_x in addresses 1 through N of the table (25);
a means (22) for generating a sequence of random values;
a means (23) for reading out at least a part M of the N carrier frequency values f_x
15 from the corresponding addresses of the table (25) on the basis of the generated sequence of random values, whereby $M \leq N$; and
a means (4, 6) for transmitting information in the corresponding carrier frequencies, whereby a means for the setup for the setup [sic] of a connection is provided that comprises:
20 means (26) for sampling a carrier frequency;
means (27) for deciding whether a message containing at least an initialization information was received on this carrier frequency during a specific time span;
configured such that, when the decision is negative, a new carrier frequency is selected and this new carrier frequency is sampled, and,
25 when the decision is positive, the sequence of random values is generated upon employment of at least the initialization information.

7. Apparatus according to claim 6, characterized by a means for converting the generated sequence of random values into address values between 1 and N with which the carrier frequency values are read from the table (25).

30 8. Apparatus according to claim 6 or 7, characterized in that a means for synchronization is provided that comprises:

means (26) for sampling a carrier frequency;

means (27) for deciding whether a message containing at least an initialization information was received on this carrier frequency during a specific time span, configured such that, when the decision is negative, a new carrier frequency is

- 5 selected and this new carrier frequency is sampled, and, when the decision is positive, the sequence of random values is generated upon employment of at least the initialization information.

9. Apparatus according to one of the claims 6 through 8, characterized in that the means (31) for readout reads a part M of the N possible carrier frequency
10 values from the table, whereby the remaining N-M carrier frequency values are employed for replacing disturbed carrier frequency values of the M carrier frequency values.

10. Apparatus according to claim 9, characterized by a means (32) for updating that updates the table from the N-M carrier frequency values before the
15 readout upon replacement of the carrier frequency values that correspond to disturbed carrier frequencies.